

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 04 April 2001 (04.04.01)	
International application No. PCT/US00/13085	Applicant's or agent's file reference 7536.100
International filing date (day/month/year) 11 May 2000 (11.05.00)	Priority date (day/month/year) 11 May 1999 (11.05.99)
Applicant RAMEY, John, S. et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 07 December 2000 (07.12.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

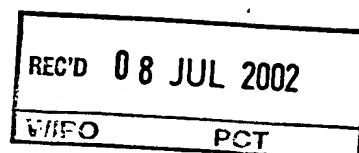
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer R. Forax Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 7536.100		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/13085	International filing date (day/month/year) 11 May 2000 (11.05.2000)	Priority date (day/month/year) 11 May 2000	
International Patent Classification (IPC) or national classification and IPC IPC(7): A61H 7/00, 23/04 and US Cl.: 601/6, 7, 9; 606/131; 604/313; 451/87, 90, 100		RECEIVED AUG 2 7 2002	
Applicant DYNATRONICS CORPORATION		Technology Center 2600	

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>8</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>9</u> sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input checked="" type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input checked="" type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 07 December 2000 (07.12.2000)	Date of completion of this report 31 March 2002 (31.03.2002)
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer Danton DeMille Telephone No. (703) 308-0858

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/13085

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed.
- ☒ the description:
pages 1-23 _____ as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☒ the claims:
pages NONE _____, as originally filed
pages 24-32 _____, as amended (together with any statement) under Article 19
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☒ the drawings:
pages 1-10 _____, as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE _____, as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages none
- ☒ the claims, Nos. none
- ☒ the drawings, sheets/fig none

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☒ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention is accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

Group I, claim(s) 1-22, drawn to a vacuum massaging device.

Group II, claim(s) 23-73, drawn to an abrasion apparatus.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: group II is drawn to an apparatus for cleaning the skin by blasting the skin with high pressurized air flow of particles and means for removing the particles by a vacuum source. Group I is drawn to a massaging apparatus using a cup shaped head for applying a suction to an area of the skin. These devices are two different devices for treating the skin having separate purposes. One uses high pressure particles to clean the skin while the other merely massages the skin by drawing a suction across the skin.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos. _____

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US00/13085

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO
Inventive Step (IS)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO
Industrial Applicability (IA)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO

2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

Please See Continuation Sheet

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US00/13085

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

V.1. Reasoned Statements:

The opinion as to Novelty was positive (Yes) with respect to claims 2, 5, 12-15, 18, 19, 22, 26-29, 35, 39, 48, 51-58, 60-64, 73

The opinion as to Novelty was negative (No) with respect to claims 1, 3, 4, 6-11, 16, 17, 20, 21, 23-25, 30-34, 36-38, 40-47, 49, 50, 59, 65-72

The opinion as to Inventive Step was positive (Yes) with respect to claims 18

The opinion as to Inventive Step was negative (NO) with respect to claims 1-17, 19-73

The opinion as to Industrial Applicability was positive (YES) with respect to claims 1-73

The opinion as to Industrial Applicability was negative (NO) with respect to claims NONE

V. 2. Citations and Explanations:

Claims 1, 3, 4, 6-11, 16, 17, 20, 21 lack novelty under PCT Article 33(2) as being anticipated by Rau. Rau teaches a head 1 defining an cavity and an opening 9 to the cavity. A substantially cylindrical post 4 having a substantially constant diameter is positioned within the cavity so that the post extends toward the opening. The post has a contact surface 4a substantially the same breadth as the diameter of the post. The flexible parts of the suction cup provide means for creating negative pressure. While Rau's device may not be intended for massaging purposes, it anticipates all of the limitations claimed.

Claims 1-17, 19-22 lack an inventive step under PCT Article 33(3) as being obvious over Funk in view of Tuilier. In the embodiment of figures 7 and 8, a head with a cavity and a substantially cylindrical post 9 is taught. While the shape of the post may not have a substantially constant diameter throughout its length such is well within the realm of the artisan of ordinary skill. There appears to be no inventive step to shape the post to have a more flat bottom surface. Tuilier uses substantially flat bottom surfaces for contacting the user. It would have been obvious to modify Funk to shape the bottom of the post 9 to have a substantially flat bottom providing more contact surface for massage.

Claims 23-25, 30-32 lack novelty under PCT Article 33(2) as being anticipated by Tasedan. Tasedan teaches a delivery and retrieval means and hand piece. The abrasive handling device of figure 4 includes a receiving channel 76, a feeding chamber 74 and a delivery channel 18. The abrasive supply device is also a waste retrieval holding device to collect and store the abrasive and waste debris after treatment.

Claims 23-28, 30-32, 60, 61 lack an inventive step under PCT Article 33(3) as being obvious over Rosso in view of Mehta. Rosso teaches an abrasive handling device including a supply device in the left half of the figure, a feeding chamber 17 and a delivery channel 18. A waste retrieval holding device in the right half of the figure is coupled to the hand piece 1. Rosso fails to teach the method and means to keep a continuous supply of abrasive material to the feeding chamber 17. Mehta teaches in figure 2 a conventional means to maintain supply of abrasive material in the feeding chamber 1. The receiving channel in the top part of figure 2 extends within the feeding chamber sufficient enough to control the amount of abrasive filling the feeding chamber.

Claims 23, 25, 26, 29, 62-64 lack an inventive step under PCT Article 33(3) as being over Rosso and Mehta as noted above and further in view of Parker. The intake of the delivery channel 18 of Rosso is in the very top portion of the feeding chamber as is the intake of the delivery channel of the Parker embodiment of figure 3. But as shown in the embodiment of figure 1 of Parker the delivery channel can exit out of the top part of the feeding chamber. The delivery channel also includes a funnel-shaped collector channel g. There is no inventive step to have the delivery channel exit out of the feeding chamber with an inverted funnel-shaped collector as taught by Parker. It would have been obvious to further modify Rosso to have the delivery channel exit out of the feeding chamber with an inverted funnel-shaped collector as taught by Parker.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Claims 23, 24, 30, 31, 42, 59, 66, 68-73 lack an inventive step under PCT Article 33(3) as being obvious over DiFiore et al. DiFiore teaches a means for delivering and retrieving material, a hand piece 16, an abrasive supply device 10, 15, a receiving channel for connecting the compressor to the feeding chamber 15, a delivery channel from the feeding chamber to the hand piece, a vacuum generator 12 and a waste retrieval holding device 17 for collecting the abrasive after treatment. To any extent the DiFiore fails to teach the details of the channels between the compressor the feeding chamber 15 and the different parts of the device such would have been an obvious provision to a skilled artisan.

Claims 25-29, 60-65 lack an inventive step under PCT Article 33(3) as being obvious over DiFiore et al. in view of Mehta. While DiFiore appears silent with regard to the details of how the abrasive material is added to the supply stream, Mehta teaches such a convention using gravity feed chambers. It would have been obvious to modify DiFiore to use the gravity feed chambers as taught by Mehta to supply the abrasive material to the feeding chamber of DiFiore.

Claims 32, 67 lack an inventive step under PCT Article 33(3) as being obvious over DiFiore et al. in view of Molinari. It would have been obvious to modify DiFiore and provide a removable tip as taught by Molinari to facilitate cleaning.

Claims 33-41 lack novelty under PCT Article 33(2) as being anticipated by Parker. Parker teaches a feeding chamber A with a funnel shaped portion C, a receiving channel b, an intake aperture c and a delivery channel g. The device also includes a funnel shaped supply device B.

Claim 42, 59, 65-70 lacks novelty under PCT Article 33(2) as being anticipated by Rosso.

Claims 43-47, 49, 50 lack novelty under PCT Article 33(2) as being anticipated by Tasedan. Tasedan teaches in figure 2 a body 45 having a delivery channel 34 concentric with the retrieval channel 50 and a dermabrasion tip 62.

Claims 48, 51 lack an inventive step under PCT Article 33(3) as being obvious over Tasedan. Forming the body into different end and middle sections is well known and using O rings are well know. Such is well known to the artisan of ordinary skill and does not involve an inventive step. It would be obvious to cut the body into sections for ease in cleaning and use O rings for sealing different pieces together.

Claims 52-58 lack an inventive step under PCT Article 33(3) as being obvious over Rosso. Rosso teaches a waste can receiver at the top of the canister 10 having the intake port and return port. A filter 12 is also taught. It is not clear from Rosso if the canister is removable for emptying the contents however, such is well within the realm of the artisan of ordinary skill. Using a frame to support the filter as well as using a removable filter are all well known expedients in the art. It would have been obvious to modify Rosso to be able to remove the canister so that the contents can be emptied along with the ability to remove the filter for replacement. The filter would inherently have to have a frame in order to support the filter away from the outlet opening or else the filter would block the outlet opening.

Claims 71 and 72 lack novelty under PCT Article 33(2) as being anticipated by Spagnolo. Spagnolo would appear to teach a method of massaging skin using a nozzle shown in figures 6 and 7 that would be abrasive to the skin. The suction would create an area of negative pressure and the abrasive members 19 create positive pressures

Claims 71-73 lack an inventive step under PCT Article 33(3) as being obvious over Molinari in view of Spagnolo. Molinari teaches in column 4, lines 37-41 that the device produces a gentle massage however, that would depend on the amount of pressure used during use. There appears to be no unobviousness to modify Molinari to vary the pressure applied to the device during use to create a deeper massage as taught by Spagnolo with abrasive pressure members 19.

NEW CITATIONS

DE 2742058 A (Rau) 29 March 1979

US 2238541 A (Spagnolo) 15 April 1941

US 554299 A (Parker) 11 February 1896

VIII. The following observations on the clarity of the claims, description, and drawings or on the questions are made:

Claims 20, 21, 37, 43-58, 60-70 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because the claims are indefinite for the following reason(s): In claim 20, in line 3 "the means" is recited. The means in line 2 was for generating an area of negative pressure. The means in line 3 comprises cylindrical post. It is not clear how the means of generating negative pressure can comprise a post. It is not clear how these to "means" can be the same thing. In the last subparagraph of claim 20, it is not clear what structure disclosed would comprehend the "means for moving the area of negative pressure along the surface of the

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US00/13085

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

object". This would appear to be the user. The user moves the device over the surface of the object. Is applicant claiming the user as part of the claimed invention?

In claim 37, there is no clear antecedent basis for "the lofting chamber".

In claim 43, there is confusion between the delivery apertures. In line 3 of page 29 a delivery aperture is recited "communicatively coupled to the first end". It is not clear to what structure the first end is referring. The claim goes on with "and the delivery channel,". It is not clear what is meant by reciting "and the delivery channel,". What about it? In line 5 the same thing can be said about "a retrieval aperture, communicatively coupled to the first end". The first end of what? The language "and the retrieval channel and" appears incomplete. The claim recites a delivery aperture is coupled to the first end and a retrieval aperture is coupled to the first end. Assuming it is the first end of the body to which applicant is referring, the device is recited to have two different apertures coupled to the first end of the body. How is this possible? In the last subparagraph a tip is recited mounted to the first end of the body however, claim 49 also recites a nozzle placed at the first end of the body and claim 50 recites a nose tube attached to the first end of the body. It would appear the same element is being referred to with three different names. In line 8 it is not clear what structure "the delivery aperture in the second end" is located. The second end of what?

In claim 52, line 2, page 30, it is not clear how "the intake port passes through the filter". How does a port pass through a filter? Air passes through the filter.

In claim 60 there is no clear antecedent basis for "the feeding chamber".

In claim 61 there is no clear antecedent basis for "the receiving channel" and "the feeding chamber".

In claim 62, there is no clear antecedent basis for "the feeding chamber".

In claim 63, there is no clear antecedent basis for "the dermabrasive supply device".

In claim 64, there is no clear antecedent basis for "the delivery channel".

In claim 65, there is no clear antecedent basis for "the material retrieval holding device".

In claim 68, there is no clear antecedent basis for "the massage head".

In claim 69, there is no clear antecedent basis for "the massage head".

In claim 70, there is no clear antecedent basis for "the head".

PATENT COOPERATION TREATY

PCT


REC'D 22 JAN 2002

WIPO

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 7536.100		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/13085	International filing date (day/month/year) 11 May 2000 (11.05.2000)	Priority date (day/month/year) 11 May 1999 (11.05.1999)	
International Patent Classification (IPC) or national classification and IPC IPC(7): A61H 7/00, 23/04 and US Cl.: 601/6, 7, 9; 606/131;604/313;451/87, 90, 100			
Applicant DYNATRONICS CORPORATION			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u> </u> sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input checked="" type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand 07 December 2000 (07.12.2000)		Date of completion of this report 26 December 2001 (26.12.2001)	
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230		Authorized officer Danton DeMille  Telephone No. (703) 308-0858	

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/13085

I. Basis of the report**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed.
- ☒ the description:
pages 1-23 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the claims:
pages 24-31 as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the drawings:
pages 1-10 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/~~fig~~ NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/13085

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
☒ paid additional fees.
☐ paid additional fees under protest.
☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention is accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
☒ not complied with for the following reasons:

Group I, claim(s) 1-22, drawn to a vacuum massaging device.

Group II, claim(s) 23-73, drawn to an abrasion apparatus.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: group II is drawn to an apparatus for cleaning the skin by blasting the skin with high pressurized air flow of particles and means for removing the particles by a vacuum source. Group I is drawn to a massaging apparatus using a cup shaped head for applying a suction to an area of the skin. These devices are two different devices for treating the skin having separate purposes. One uses high pressure particles to clean the skin while the other merely massages the skin by drawing a suction across the skin.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
☐ the parts relating to claims Nos. _____

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US00/13085**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>23-73</u>	YES
	Claims <u>1-22</u>	NO
Inventive Step (IS)	Claims <u>33-41</u>	YES
	Claims <u>1-32, 42-73</u>	NO
Industrial Applicability (IA)	Claims <u>1-73</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 1-22 lack novelty under PCT Article 33(2) as being anticipated by Beauclaire or Coaz. Beauclaire teaches a concave head 2, a post 6, 10 and means 14 for creating negative pressure. Coaz also teaches a concave head 1, 3, a post 9, 15 and means 7 for creating negative pressure.

Claims 23, 24, 30, 31, 42, 59, 66, 68-73 lack an inventive step under PCT Article 33(3) as being obvious over DiFiore et al. DiFiore teaches a means for delivering and retrieving material, a hand piece 16, an abrasive supply device 10, 15, a receiving channel for connecting the compressor to the feeding chamber 15, a delivery channel from the feeding chamber to the hand piece, a vacuum generator 12 and a waste retrieval holding device 17 for collecting the abrasive after treatment. To any extent the DiFiore fails to teach the details of the channels between the compressor the feeding chamber 15 and the different parts of the device such would have been an obvious provision to a skilled artisan.

Claims 25-29, 60-65 lack an inventive step under PCT Article 33(3) as being obvious over DiFiore et al. in view of Mehta. While DiFiore appears silent with regard to the details of how the abrasive material is added to the supply stream, Mehta teaches such a convention using gravity feed chambers. It would have been obvious to modify DiFiore to use the gravity feed chambers as taught by Mehta to supply the abrasive material to the feeding chamber of DiFiore.

Claims 32, 67 lack an inventive step under PCT Article 33(3) as being obvious over DiFiore et al. in view of Molinari. It would have been obvious to modify DiFiore and provide a removable tip as taught by Molinari to facilitate cleaning.

Claims 33-41 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a dermabrasion delivery channel placed above the feeding chamber to receive the displaced abrasive.

Claims 43-51 lack an inventive step under PCT Article 33(3) as being obvious over Tasedan. Tasedan teaches in figure 2 a body 45 having a delivery channel 34 concentric with the retrieval channel 50 and a dermabrasion tip 62. It is not clear if the dermabrasion tip is removably mounted to the body however, such is well known to the artisan of ordinary skill and does not involve an inventive step. It would be obvious to replace the tip when worn, damaged or for cleaning.

Claims 52-58 lack an inventive step under PCT Article 33(3) as being obvious over Rosso. Rosso teaches a waste can 10 with a waist canister in the comprising the chamber making up the canister. A filter 12 is also taught. It is not clear from Rosso if the canister is removable for emptying the contents however, such is well within the realm of the artisan of ordinary skill. It would have been obvious to modify Rosso to make the canister part of the waste can removable so that the contents can be emptied. The filter would inherently have to have a frame in order to support the filter away from the outlet opening or else the filter would block the outlet opening.

Claims 1-73 meet the criteria set out in PCT Article 33(4) for industrial applicability.

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1. A massage device comprising:
 - a head defining a cavity and defining an opening to the cavity, the head having a first contact surface;
 - a substantially cylindrical post having a substantially constant diameter throughout its length, the post being connected to the head and positioned within the cavity so that the post extends toward the opening, the post being static relative to the head during massage, the post having a second contact surface that has substantially the same breadth as the diameter of the cylindrical post; and
 - a means for creating negative pressure within the cavity.
2. The device claimed in claim 1 wherein the first contact surface of the head is substantially flat and substantially broad so as to enable an effleurage-like massage.
3. The device claimed in claim 1 wherein the second contact surface of the post is substantially flat and substantially broad so as to enable an effleurage-like massage.
4. The device as claimed in claim 1 wherein the post is recessed within the cavity.
5. The device as claimed in claim 1 further including an elongate handle attached to said head, the length of the handle being substantially perpendicular to the vertical axis of said cylindrical post.
6. The device as claimed in claim 1 wherein the head further comprises a rim having a contact surface and wherein the second contact surface is interior to the contact surface of the rim.
7. The device as claimed in claim 1 wherein the head further comprises a rim and wherein the post is radially interior to the rim.
8. The device as claimed in claim 1 wherein the head further comprises a rim, the rim being capable of creating a substantially air tight seal.
9. The device as claimed in claim 1 wherein the cavity and means for providing negative pressure define a petrissage element and the first contact surface and second contact surface define an effleurage element.
10. The device as claimed in claim 1 wherein the means for creating negative pressure within the cavity is a vacuum source and wherein the head further comprises an orifice, the orifice being in communication with the vacuum source.

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11. A device for massaging or body contouring comprising:

a head, the head having one or more inner walls and a rim, the head defining a cavity and an opening to the cavity, the opening being bordered by the rim, the rim being capable of creating a substantially air tight seal;

5 a post connected to the head and extending toward the opening, the post being substantially cylindrical and having a substantially constant diameter throughout its length, the post being static relative to the head during massage, the post having a substantially flat contact surface, the contact surface having substantially the same breadth as the diameter of the cylindrical post; and

10 means for creating negative pressure within the cavity.

12. The device claimed in claim 11 further comprising one or more substantially flat contact surfaces.

13. The device as claimed in claim 12 wherein the rim has a substantially flat contact surface.

14. The device as claimed in claim 13 wherein the head is hemispherical.

15 15. The device as claimed in claim 13 wherein the post is recessed within the cavity.

16. The device as claimed in claim 11 wherein the means for creating negative pressure within the cavity is a vacuum source and wherein the head further comprises an orifice, the orifice communicating with the vacuum source.

17. The device claimed in claim 16 wherein the post is connected to the inner wall of the head.

18. The device as claimed in claim 17 wherein the post is longitudinally adjustable.

19. A device for massaging or body contouring comprising:

30 a head having a concave inner wall and a rim, the concave wall defining an orifice communicating with a vacuum source and the rim having a substantially flat, contact surface, the concave wall and rim defining a cavity and an opening to the cavity, the cavity being substantially semi-spherical,

35 a post extending from the concave inner wall toward the opening, the post being substantially cylindrical and having a substantially constant diameter throughout its length, the post being static relative to the head during massage, the post having a substantially flat contact surface, the contact

surface having substantially the same breadth as the diameter of the cylindrical post; and

a handle defining an internal conduit within the handle, the conduit having a first open end and a second open end, the conduit communicating with the orifice at the first open end and communicating with the vacuum source at the second open end.

20. A device for massaging an object comprising:

means for generating an area of negative pressure along a surface of the object, the area having a perimeter, the means comprising at least one substantially cylindrical post having a substantially constant diameter throughout its length, the post being static relative to the head during massage, the post having a substantially flat contact surface, the contact surface having substantially the same breadth as the diameter of the cylindrical post;

means for applying positive pressure to the area of skin undergoing negative pressure internal to the perimeter of the area; and

means for moving the area of negative pressure along the surface of the object while continuing to apply positive pressure.

21. The device as claimed in claim 20 wherein the means for creating an area of negative pressure is a head defining a cavity and a rim, a cavity communicating with a vacuum source and the rim being capable of creating a substantially air tight seal.

22. A method for massaging an object comprising:

creating an area of negative pressure on the object, the area of negative pressure defined by a perimeter of positive pressure;

applying a second positive pressure radially interior to the perimeter, the means for applying said second positive pressure comprising a substantially cylindrical post having a substantially constant diameter throughout its length, the post being static during massage, the post having a substantially flat contact surface, the contact surface having substantially the same breadth as the diameter of the cylindrical post; and

moving the area of negative pressure defined by the positive pressure perimeter along the surface of the object while continuing to apply the second positive pressure in the area under negative pressure.

23. An abrasion apparatus comprising:

means for delivering and retrieving material to and from a selected site to be abraded;

a delivery and retrieval hand piece, coupled to the delivery and retrieval means;
an abrasive handling device, coupled to the hand piece, comprising:

an abrasive supply device;

a receiving channel, coupled to the supply device;

5 a feeding chamber, coupled to the receiving channel;

a delivery channel, coupled to the feeding chamber and the hand piece;

a waste retrieval holding device, coupled to the hand piece, to collect and store
the abrasive and waste debris after treatment.

10 24. The apparatus according to claim 23 wherein the delivery and retrieval
means comprises a vacuum generator that generates a vacuum for drawing the abrasive
through the apparatus.

25. The apparatus according to claim 23 wherein the abrasive supply device
gravity feeds the abrasive to the feeding chamber.

15 26. The apparatus according to claim 23 wherein the receiving channel
extends within the feeding chamber sufficient enough to control the amount of abrasive
filling the feeding chamber.

27. The apparatus according to claim 23 wherein the feeding chamber
comprises a top, a bottom, and generally inwardly sloped walls from the top to the
bottom.

20 28. The apparatus according to claim 27 wherein the abrasive supply device
comprises generally inwardly sloping walls with an opening at the bottom coupled to the
receiving channel.

25 29. The apparatus according to claim 23 wherein the delivery channel
connects to an inverted generally funnel-shaped collector channel used to receive
abrasive within the feeding chamber and direct it to the delivery channel.

30. The apparatus according to claim 23 wherein the material retrieval holding
device comprises a filter.

31. The apparatus according to claim 23 wherein the hand piece comprises a
supply aperture and a return aperture.

30 32. The apparatus according to claim 23 wherein the hand piece comprises a
removable tip that has an aperture that contacts the surface to be abraded.

35 33. An abrasive handling device for use in an abrasion apparatus, comprising:
a feeding chamber that has generally funnel-shaped portion that receives an
abrasive;

a receiving channel that limits the amount of abrasive supplied to the feeding chamber;

an intake aperture, connected to a base of the feeding chamber to receive means for displacing the abrasive in a substantially vertical direction; and

5 a delivery channel, placed above the feeding chamber to receive the displaced abrasive.

34. The device according to claim 33 further comprising a generally funnel-shaped supply device, positioned above the feeding chamber and connected to the receiving channel.

10 35. The device according to claim 34 further comprising an abrading material holding container removably fitted with a funnel that fits within the supply device.

36. The device according to claim 33 wherein the device is pneumatically driven.

15 37. The device according to claim 33 wherein the funnel-shape of the lofting chamber forms an arc ranging approximately 40 degrees to 90 degrees.

38. The device according to claim 33 wherein the funnel-shape of the feeding chamber forms an arc of generally 60 degrees.

39. The device according to claim 36 further comprising an airflow regulator, coupled to the delivery channel, to regulate the flow abrasive during operation.

20 40. The device according to claim 33 wherein the delivery channel comprises an inverted funnel-shaped opening within the feeding chamber.

41. The device according to claim 33 further comprising a transition chamber disposed between the supply device and the feeding chamber.

25 42. A dermabrasion apparatus comprising:
a delivery and retrieval hand piece;
a dermabrasive handling device, coupled to the hand piece, comprising:

30 a dermabrasive supply device;
a receiving channel, coupled to the supply device;
a feeding chamber, coupled to the receiving channel;
a delivery channel, coupled to the feeding chamber and the hand piece;
a waste debris receiving device, coupled to the hand piece, to collect and store waste debris and the dermabrasive after treatment.

35 43. A dermabrasion hand piece for use in a dermabrasion system to deliver and retrieve an abrasive to and from a site to be abraded during a dermabrasion procedure, the hand piece comprising:

5 a body having a first end, a second end, a delivery channel, a retrieval channel,
the delivery channel being concentric with the retrieval channel and
extending the length of the body, a delivery aperture, communicatively
coupled to the first end and the delivery channel, and a retrieval aperture,
communicatively coupled to the first end and the retrieval channel and
concentric with the delivery aperture; and

10 a dermabrasion tip having a first end, which removably mounts to the first end
of the body, a second end, a delivery aperture in the second end that is
communicatively coupled with the body delivery aperture and the body
retrieval aperture.

15 44. The hand piece according to claim 43 wherein the delivery channel
includes an intake aperture and the retrieval channel includes an outlet aperture, both
intake and outlet apertures positioned at the second end of the body with the intake
aperture concentric with the delivery channel and the outlet aperture offset from the
intake aperture.

45. The hand piece according to claim 44 wherein the removable tip is
generally dome-shaped.

46. The hand piece according to claim 44 wherein the delivery channel
comprises a hollow tube coupled between the first and second ends of the body.

20 47. The hand piece according to claim 46 wherein the hollow tube is
removable.

48. The hand piece according to claim 47 wherein the body comprises a
middle portion and an end portion removably connected to the middle portion.

25 49. The hand piece according to claim 44 further comprising a nozzle placed
at the first end of the body adjacent the delivery aperture with an opening through which
the abrasive passes.

50. The hand piece according to claim 44 further comprising a nose tube,
concentric with the delivery channel and removably attached to the first end of the body.

30 51. The hand piece according to claim 44 further comprising an O-ring
mounted on the first end of the body.

52. A waste debris collection device for use in a dermabrasion system, the
device comprising:

a waste can receiver having an intake port and a return port;

35 a waste canister removably coupled to the waste can receiver at an open end of
the waste canister; and

a filter disposed between waste can receiver and the waste can such that the intake port passes through the filter and the filter prevents waste debris from exiting the waste canister through the return port.

53. The waste debris collection device according to claim 52 further comprising a filter frame used to support and retain the filter in position between the waste can receiver and the waste canister and having an aperture through which the intake port passes.

54. The waste debris collection device according to claim 52 wherein the filter has an area substantially the same as the opening of the waste canister.

55. The waste debris collection device according to claim 52 further comprising pliable retention prongs to secure the filter between the waste canister and the waste canister receiver to prevent air-bleeding at the filter location.

56. The waste debris collection system according to claim 53 wherein the filter is removable.

57. The waste debris collection system according to claim 53 wherein the waste canister further comprises a removable lid to seal the waste canister upon removal from the waste can receiver.

58. The waste debris collection system according to claim 53 wherein the filter comprises a fabric having pores sufficiently small enough to prevent the abrasive and collected waste debris from passing therethrough.

59. An apparatus for performing dermabrasion or massaging, comprising:
means for generating negative pressure;

a massage device, coupled to the generating means, comprising:

a massage head;

a handle, coupled to the massage head and the generating means; and

a dermabrasion device, coupled to and operable by the generating means, comprising:

a delivery and retrieval hand piece;

a dermabrasive handling device, coupled to the hand piece; and,

a waste debris receiving device, coupled to the hand piece, to collect and store waste debris and the dermabrasive after treatment.

60. The apparatus according to claim 59 wherein the dermabrasive handling device gravity feeds the dermabrading material to the feeding chamber.

61. The apparatus according to claim 59 wherein the receiving channel extends within the feeding chamber a sufficient distance to control the amount of dermabrasive entering the feeding chamber.

62. The apparatus according to claim 59 wherein the feeding chamber comprises a generally funnel shaped chamber in which the dermabrasive is lofted during operation.

5 63. The apparatus according to claim 62 wherein the dermabrasive supply device comprises a generally funnel-shaped holder with an opening at a bottom tip of the holder to feed the receiving channel.

64. The apparatus according to claim 59 wherein the delivery channel connects to an inverted generally funnel-shaped collector channel to receive the dermabrasive within the feeding chamber and direct it to the delivery channel.

10 65. The apparatus according to claim 59 wherein the material retrieval holding device comprises a filter.

66. The apparatus according to claim 59 wherein the hand piece comprises a delivery aperture a retrieval aperture.

15 67. The apparatus according to claim 59 wherein the hand piece comprises a replaceable tip unit that has an opening.

68. The apparatus claimed in claim 59 wherein the massage head further comprises one or more substantially flat contact surfaces.

69. The apparatus as claimed in claim 59 wherein the massage head further comprises a rim and the rim has a substantially flat contact surface.

20 70. The apparatus as claimed in claim 59 wherein the means for creating negative pressure within the cavity is a vacuum source and wherein the head further comprises an orifice, the orifice communicating with the vacuum source.

71. A method for treating a skin surface comprising:
25 using a massage device, performing a deep tissue massage across a section of the skin; and

using a dermabrasion device, performing a dermabrasion treatment across the section of the skin.

72. The method for treating a skin surface according to claim 71 wherein the deep tissue massage performing step comprises:

30 generating an area of negative pressure on the skin surface, the area of negative pressure defined by a perimeter of positive pressure;

applying a second positive pressure radially interior to the perimeter;

35 moving the area of negative pressure defined by the positive pressure perimeter along the surface of the skin while continuing to apply the second positive pressure in the area under negative pressure.

73. The method for treating a skin surface according to claim 71 wherein the dermabrasion treatment step comprises:

generating an area of negative pressure on the skin, the area of negative pressure defined by a perimeter of positive pressure;

5 drawing dermabrasive material within the area of negative pressure on the skin to cause the dermabrasive material to abrade the skin surface; and

using the negative pressure to remove the dermabrasive material and abraded skin debris to a refuse container.

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PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

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1800 EAGLE GATE TOWER
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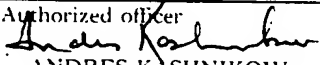
Applicant's or agent's file reference 7536.100	Date of Mailing (day/month/year) 02 JUL 2002
International application No. PCT/US00/13085	International filing date (day/month/year) 11 MAY 2000
Applicant DYNATRONICS CORPORATION	

1. ☐ REPLY DUE within months/~~days~~ from the above date of mailing

☒ NO REPLY DUE

2. COMMUNICATION:

The International Preliminary Examination Report (IPER) mailed 18 January 2002 did not take into consideration the response filed 28 September 2001 to the Written Opinion mailed 29 August 2001. The response was timely filed. Accordingly, the IPER mailed 18 January 2002 is vacated in favor of the new and concurrently mailed IPER.

Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box 10CT Washington, D.C. 20231	Authorized officer  ANDRES KASHNIKOW
Facsimile No. (703) 305-3230	Telephone No. (703) 308-1137

INTERNATIONAL SEARCH REPORT

Inte. lional application No.

PCT/US00/13085

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claim Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Continuation Sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/13085

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1-22, drawn to a vacuum massaging device.

Group II, claim(s) 23-73, drawn to an abrasion apparatus.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: group II is drawn to an apparatus for cleaning the skin by blasting the skin with high pressurized air flow of particles and means for removing the particles by a vacuum source. Group I is drawn to a massaging apparatus using a cup shaped head for applying a suction to an area of the skin. These devices are two different devices for treating the skin having separate purposes. One uses high pressure particles to clean the skin while the other merely massaging the skin by drawing a suction across the skin.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/13085

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61H 7/00, 23/04

US CL : 601/6, 7, 9; 606/131; 604/313; 451/87, 90, 100

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 601/6, 7, 9-12, 14; 606/131; 604/313; 451/87, 88, 90, 99, 100, 102

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---	FR 1109131 A (BEAUCLAIRE) 23 JANUARY 1956 (23.06.1956) SEE ENTIRE DOCUMENT.	1-22 -----
Y		1-22
X ---	DE 2218370 A (COAZ) 06 SEPTEMBER 1973 (06.09.1973) SEE ENTIRE DOCUMENT.	1-22 -----
Y		1-22
X	FR 638309 A (BERND) 22 MAY 1928 (22.05.1928) SEE ENTIRE DOCUMENT.	1-10
A	DE 3535571 A (FRENKEL) 27 MAY 1987 (27.05.1987).	
A	DE 532086 A (STEPHANI) 24 AUGUST 1931 (27.08.1931).	
A	SE 152189 A (LUNDGREN) 01 NOVEMBER 1955 (01.11.1955).	
A	DE 201229 A (MULLER) 10 DECEMBER 1958 (10.12.1958).	
A	SU 1556676 A (GUSKOV) 15 APRIL 1990 (15.04.1990).	
A	FR 1501054 A (TUILIER) 10 NOVEMBER 1967 (10.11.1967).	
A	CH 168279 A (FUNK) 16 JUNE 1934 (16.06.1934).	
Y	US 5810842 A (DI FIORE ET AL) 22 SEPTEMBER 1998 (22.09.1998) SEE ENTIRE DOCUMENT.	23-32, 42, 59-73

☒ Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

09 August 2000 (09.08.2000)

Date of mailing of the international search report

05 OCT 2000

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

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Authorized officer

Danton DeMille

Telephone No. (703) 308-0858

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/13085

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3543444 A (MEHTA) 01 DECEMBER 1970 (01.12.1970) SEE ENTIRE DOCUMENT.	25-29, 60-65
Y	US 5037432 A (MOLINARI) 06 AUGUST 1991 (06.08.1991) SEE ENTIRE DOCUMENT.	32, 67
Y	US 4333277 A (TASEDAN) 08 JUNE 1982 (08.06.1982) SEE ENTIRE DOCUMENT.	43-51
Y	US 5100412 A (ROSSO) 31 MARCH 1992 (31.03.1992) SEE ENTIRE DOCUMENT.	52-58